IN THE SPECIFICATION

Please insert the following text on page 1 before line 1 as a separate paragraph.

This application is a Divisional application of U.S. Serial No. 09/555,518 filed on August 23, 2000, now allowed, which is a 371 of PCT/GB 98/03695 filed on December 10, 1998.

Page 3, beginning at line 24, amend the paragraph to read as follows:

It has further been observed that the Wulff effect is dependent on the conditions which prevail in the reaction mass. For example, for a given solvent/catalyst and pressure applied, the Wulff effect is dependent on temperature and time, as can be seen from the graphs shown in Figures 1 and 2. The graph of Figure 1 shows the temperature dependence of the Wulff effect on diamond in an iron-nickel solvent/catalyst at about ~~5,4~~ 5.4 GPa, with this condition being maintained for one hour. The graph of Figure 2 shows the temperature dependency of the Wulff effect on diamond in the same iron-nickel solvent/catalyst at about ~~5,4~~ 5.4 GPa with the condition being maintained for ten hours. From these graphs, it will be noted that the larger the source crystal size the higher the applied temperature to ensure that the Wulff effect dominates and the production of a crystal mass containing a high proportion of single crystal having facets of low Miller index is achieved. Similar graphs can be produced for other solvent/catalysts and applied pressures to determine under what conditions the Wulff effect dominates.

Page 4, beginning at line 15, amend the paragraph to read as follows:

The conditions of elevated temperature and pressure for crystal growth will vary according to the nature of the crystal. For diamond crystals, the elevated temperature will

generally be in the range 1100 to 1500°C and the elevated pressure generally in the range ~~4,5~~ 4.5 to 7 GPa.

Page 6, beginning at line 9, amend the paragraph to read as follows:

Figure 1 is a graph showing the temperature dependence of the Wulff effect on diamond in an iron-nickel solvent/catalyst at about ~~5,4~~ 5.4 GPa with the condition being maintained for one hour,

Figure 2 is a graph showing the temperature dependence of the Wulff effect on diamond in an iron-nickel solvent/catalyst at about ~~5,4~~ 5.4 GPa with the condition being maintained for 10 hours,

Figure 3 is a graph comparing the recovered diamond particle size distribution with a starting diamond particle size distribution,

Figure 4 is a photograph at 260 x magnification of angular source diamond crystals,

Figure 5 is a photograph of faceted and some twinned diamond crystals at 260 x magnification produced by the method of the invention, and

Figure 6 is a photograph of the crystals of Figure 3 at 520 x magnification.

Page 10, beginning at line 2, amend the paragraph to read as follows:

A reaction capsule described above was used to produce a plurality of faceted diamond crystals, together with some twinned crystals. A mixture was made of (a) 50g diamond particles with a particle size distribution of from 20 to 40 microns and produce by crushing coarser synthetic material, and (b) 285g iron-cobalt powder. The diamond particles were free of macroscopic facets. The mixture as placed in the reaction capsule and raised to conditions of about ~~5,5~~ 5.5 G Pa and about 1420°C. These conditions were maintained for a period of 11 hours. The resultant crystals were almost entirely faceted and in some cases

twinned. The total mass of crystals recovered was 41g and these were substantially in the size range from 30 to 50 microns. At least 8 percent by mass of the particles were single crystal.

Page 10, beginning at the last line, amend the paragraph to read as follows:

A reaction capsule described above was again used to produce a plurality of faceted diamond crystals. A mixture was made of (a) 50g diamond particles, with a maximum size of 8 microns and minimum size of 4 microns, produced by crushing coarser synthetic material, and (b) ~~284,6g~~ 284.6g cobalt-iron solvent. The diamond articles were free of macroscopic facets. The mixture was placed in the reaction capsule and raised to conditions of about ~~5,5~~ 5.5 GPa and about 1370°C. These conditions were maintained for a period of 11 hours. The grown crystals were entirely faceted and in some cases twinned, and ranged in size from about 6 microns to about 10 microns. A total mass of ~~39,5g~~ 39.5g of crystals was recovered. At least 80 percent by mass of the particles were single crystal.

Page 11, beginning at line 12, amend the paragraph to read as follows:

A reaction capsule described above was used again to produce a plurality of faceted diamond crystals. A mixture was made of 30 percent by volume diamond particles with a particle size distribution of from 20 to 40 microns and produced by crushing coarser synthetic material, and (b) 70 percent by volume iron-nickel powder. The diamond particles were free of macroscopic facets. The mixture was placed in the reaction capsule and raised to conditions of about ~~5,5~~ 5.5 Pa and about 1400°C. These conditions were maintained for a period of 20 minutes. The resultant crystals were entirely faceted and in some case twinned, with their sizes in the range from 25 to 45 microns. At least 80 percent by mass of the particles were single crystal.

Page 12, beginning at line 2, amend the paragraph to read as follows:

A reaction capsule described above as again used to produce a plurality of faceted diamond crystals. A mixture was made of (a) 30 percent by volume natural diamond particles of irregular shape and with a particle size distribution from 20 to 40 microns and (b) 70 percent by volume cobalt-iron powder. The diamond particles were free of macroscopic facets. The mixture was placed in the reaction capsule and raised to a condition of about ~~5,5~~ 5.5 GPa and about 1370°C, and the conditions maintained for a period of 1 hour. The recovered crystals were found to be entirely faceted, and in some cases twinned. The size of these crystals were in the range from 25 to 50 microns. At least 80 percent by mass of the particles were single crystals.

Page 13, please amend TABLE I to read as follows:

TABLE I

Example	Solvent/catalyst or matrix (nominal composition)	Pressure (GPa)	Temperature (°C)	Time (mins)
5	100Fe	~~5,25~~ 5.25	1390	660
6	100Co	~~5,25~~ 5.25	1390	660
7	100Ni	~~5,48~~ 5.48	1410	660
8	100Cu	~~5,35~~ 5.35	1400	660
9	100Mn	~~5,35~~ 5.35	1400	660
10	89Ni.11P	~~5,42~~ 5.42	1250	660
11	52Mn.48Ni	~~5,25~~ 5.25	1360	40
12	80Cu.20Ni	~~5,3~~ 5.3	1400	300
13	60Cu.40Sn	~~5,35~~ 5.35	1400	660
14	60Co.24Cu.16Sn	~~5,3~~ 5.3	1400	300
15	42Cu.30Co.28Sn	~~5,3~~ 5.3	1400	300
16	54Cu.36Sn.10Co	~~5,35~~ 5.35	1400	660
17	77Ni.13Cr.10P	~~5,42~~ 5.42	1410	660
18	64Cu.18Ni.18Zn	~~5,3~~ 5.3	1400	300
19	64Fe.28Ni.8Si	~~5,39~~ 5.39	1370	300
20	47Cu.40Zn.13Ni	~~5,3~~ 5.3	1400	300
21	30Cu.26Mn.24Ni.20Sn	~~5,25~~ 5.25	1360	40
22	45Cu.30Fe.25Co	~~5,3~~ 5.3	1400	300
23	55Cu.25Co.20Fe	~~5,3~~ 5.3	1400	300
24	49Cu.32Co.15Sn.4Ag	~~5,3~~ 5.3	1400	300
25	55Cu.25Co.13Fe.7Ni	~~5,3~~ 5.3	1410	300

Page 14, please amend TABLE II to read as follows:

TABLE II

Example	Source diamond size (micron)	Solvent/catalyst Type	Pressure GPa	Temperature (°C)	Time (mins)
26	~~0,3~~ 0.3	Co	~~4,8~~ 4.8	1170	660
27	2	Co-Fe	~~5,3~~ 5.3	1380	660
28	8	Co-Fe	~~5,3~~ 5.3	1380	660
29	22	Co-Fe	~~5,3~~ 5.3	1380	660
30	35	Fe-Ni	~~5,1~~ 5.1	1370	60
31	57	Fe-Ni	~~5,3~~ 5.3	1400	660
32	115	Fe-Ni	~~5,3~~ 5.3	1400	660

Page 14, line 2 following TABLE II, please amend the paragraph to read as follows:

The particle size distribution of a mass of source diamond particles free of macroscopic facets and with a nominal size range of 30 microns to 45 microns was measured using a laser beam diffraction method. A mixture was made of (a) 25 % by volume of these source diamond particles, and (b) 75 % by volume iron-nickel powder. The mixture was placed in a reaction capsule and raised to conditions of about ~~5,3~~ 5.3 GPa and about 1360°C for a period of 18 minutes.

Page 15, beginning at line 1, amend the paragraph to read as follows:

The mass of diamond lost was found to be 24 % or ~~3,5~~ 3.5 % of the mass of the solvent/catalyst, which is commensurate with the solubility of the diamond in the solvent/catalyst. The particle size distributions of the source diamond particles and the faceted diamond recovered from the reaction capsule are shown in Figure 3. The size distribution of the source diamond particles and the recovered faceted diamond particles are substantially the same, with the recovered diamonds being slightly larger than the source diamonds, which is also shown by a slight decrease in specific surface area from ~~0,178~~ 0.178 square ~~metres~~ meters per gram to ~~0,16~~ 0.168 square ~~metres~~ meters per gram. The slight

coarsening of the size distribution is confirmation of the faceting being due to a growth process utilising the Wulff effect rather than a dissolution process.

Page 15, beginning at line 14, amend the paragraph to read as follows:

A mass of source synthetic diamond particles free of macroscopic facets and with a nominal size range of 24 microns to 48 microns, was coated with a layer of nickel-phosphorus about 2 microns thick. The layer was deposited using an electroless method in such a way that the coated particles were substantially discrete. A mixture comprising (a) 20% by volume of the coated diamond particles, and (b) 80% by volume sodium chloride was made, and this mixture placed in reaction capsule. The reaction capsule was raised to conditions of about ~~5,2~~ 5.2 GPa and about 1310°C for a period of 300 minutes. The diamond was recovered from the reaction capsule by dissolving the sodium chloride in warm water. Examination of the recovered diamond showed it to be almost entirely faceted.

Page 16, beginning at line 2, amend the paragraph to read as follows:

A mixture was made of (a) 30 % by volume synthetic diamond particles free of macroscopic facets and with a particle size less then ~~0,5~~ 0.5 micron, and (b) 70% by volume cobalt powder. This mixture was placed in a reaction capsule and raised to conditions of about ~~4,8~~ 4.8 GPa and 1170°C, and the conditions maintained for a period of 11 hours. The diamond was recovered from the reaction capsule by dissolving the cobalt in dilute hydrochloric acid, and filtering the diamond from the liquor. Examination of the diamond showed faceted crystals with a size substantially less than 1 micron. According to Muncke (see "The Properties of Diamond" edited by J E Field, page 517, Academic Press 1979), the eutectic temperature in the Co-C system at ~~4,8~~ 4.8 GPa is about 1375°C, thus under the

conditions imposed in this example, the reaction mixture was in the solid state during the crystal growth period.